Bozeman (N) J. C. Peters

KOLPOKLEISIS

AS A MEANS OF

TREATING VESICO-VAGINAL FISTULE:

IS THE PROCEDURE EVER NECESSARY?

BY

NATHAN BOZEMAN, M.D.,

Member of the American Medical Association; Permanent Member of the New York State Medical Society; Member of the New York County Medical Society; Fellow of the New York Academy of Medicine; Member of the New York Medico-Legal Society; Member of the New York Pathological Society; Corresponding Member of the Gynæcological Society of Boston, Massachusetts; Corresponding Member of the Obstetrical Society of Philadelphia; Honorary Member of the Obstetrical Society of Louisville; Consulting Surgeon to the St. Elizabeth's Hospital, etc. etc. etc.

EXTRACTED FROM THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

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KOLPOKLEISIS AS A MEANS OF TREATING VESICO-VAGINAL FISTULE.

THERE is no disease, perhaps, within the whole range of surgical pathology, thought to be more amenable to treatment, and, at the same time, to afford the surgeon more gratifying results, than that of vesico-vaginal fistule; and, yet, I am prepared to say, there is no malady of like gravity which is less understood by the profession at large, as regards its successful treatment, and more deserving to-day of the serious attention of thinking surgeons. The settled conviction in the minds of many, that the magic twist of a piece of silver wire, the all-sufficient duck-bill speculum, and kolpokleisis, are means sufficient to enable the merest tyro in surgery to surmount the gravest obstacles, and to confer upon the object of his care the greatest possible benefits.

Having myself, for nearly a quarter of a century, been extensively occupied with the real difficulties attending the treatment of vesico-vaginal fistule, I may be pardoned for saying that I do not share in the above convictions. I propose to clearly define my position upon these several points in the following remarks.

The speculum, and the suture, whether of silver wire or of Chinese silk, are, altogether, of secondary consideration as regards the real difficulties to be overcome, and can only be useful in simple cases, amounting to about 50 per cent., where there is comparatively but little choice of methods.

As to kolpokleisis, I do not consider it a cure of vesico-vaginal fistule at all, and, at best, can only be regarded as an expedient of doubtful propriety. The remaining 50 per cent. of cases comprising the difficult and complicated, are but little amenable to speculum or suture, until they have been reduced to a state

of simplicity by *immediate or gradual preparatory treatment*, and here lies the secret of success, which is only just beginning to seriously attract the attention of European surgeons, especially those of the continent.

Prof. Amabile, of the Royal University of Naples, in his discourse, delivered before the International Congress of Physicians at Brussels, on the 23d September, 1875, by his advocacy of the return of the profession to the employment of the old methods of cauterization, and of hooks or claws, such as those recommended by Naegelé, Lallemand, Laguier, and others, furnished a most convincing proof of how little was generally known at this late day of the fundamental principle, which I have just indicated, when he said:—

"The treatment of vesico-vaginal fistule, by means of paring and suture, notwithstanding it has given splendid results, and been earnestly extolled in our own day, has never popularized itself among surgeons, and rests, at present, in the hands of a few. Often in a country only one or two surgeons employ it. Distinguished operators, wishing to try it, have often given it up after their first failure. Again patients, when fully impressed with the gravity of their disease, often cannot make up their minds to submit to a repetition of this mode of treatment, because it is, if not very painful and dangerous, always laborious, long and tedious for everybody, the surgeon and assistants even more than the patients themselves."

Such was the discouraging picture drawn of the ordinary treatment of vesico-vaginal fistule two years ago with suture appliances, including even the so-called *American method*, by an eminent surgeon, who had devoted much time and attention to the subject. If he did not reflect the general sentiment of the scientific body that he addressed, he certainly enunciated a fact which had strong support in the practice of well-known operators on the continent, as I satisfied myself from personal observation in the hospitals of several of the large cities during a recent and somewhat protracted visit there.

Scarcely need I say, the lukewarmness above shown in support of the suture or bloody operation for vesico-vaginal fistule can be attributed to no other cause than *a want of knowledge of the value of preparatory treatment*, the practical mode of dealing with vaginal atresias.

It was the recognition of this important principle of practice, and the successful employment of it in 1855, which led me to the achievement of results previously unknown, and which in breadth of conservatism and utility even challenge comparison with those of the best operators at the present moment. The following statement of 40 cases of vesico-vaginal fistule reported by me from May, 1855, to June, 1859, when the subject was comparatively little understood, is here adduced in support of the above statements:—

Upon 52 fistules in 40 patients, 68 operations were performed.

CLASS I.—Upon 45 fistules in 35 patients, 55 operations were performed. These cases, including one of vesico-uterine fistule, were all entirely cured, with preservation of the sexual and procreative functions, excepting one in which there was incarceration of the cervix uteri in the bladder, caused by old adhesions between the two organs.[1]

CLASS II.—Upon 1 fistule in 1 patient, 1 operation was performed. Obliteration of the vagina in the urethral portion; kolpokleisis (after the successful closure of a very large recto-vaginal fistule) was the procedure adopted, which brought continence of urine, though at the cost of both the sexual and procreative functions.

CLASS III.—Upon 4 fistules in 2 patients, 11 operations were performed. These cases were all completely cured, with pre-

[1] In the case excepted, the procedure of Jobert, founded upon the idea of attaching the posterior lip of the cervix uteri to the anterior border of the fistule and turning the menstrual secretion through the bladder, had been twice unsuccessfully attempted by Dr. J. M. Sims, and the closure finally effected by me was in accordance with the same plan. Thus was the procreative function destroyed. But in two other cases of the same sort the incarcerated organs were disengaged from their confined positions by a new procedure, and all the functions in each preserved. Besides these two last-named cases there was one which had been abandoned as incurable by Dr. Sims, who was then using his "clamp suture;" and several more which had previously undergone, from first to last, between thirty and forty operations by the same well-known method, seven-eighths of them at least by Dr. Sims himself. Another case had undergone almost complete obliteration of the vagina (episiokleisis) by a former surgeon. This obstruction had to be overcome and the fistule exposed before commencing the regular treatment. Still another case of the same class, a patient of Dr. Meigs, of Philadelphia, had undergone an operation ten years before, with partial success, on the principle of the tongued and grooved joint, by Dr. Joseph Pancoast, which was described by him at that time as a new method. (See *Medical Examiner*, May, 1847.)

servation of the sexual and procreative functions, but afterwards relapsed, owing to the incompleteness of the preparatory treatment.

CLASE IV.—Upon 1 fistule in 1 patient, 1 operation was performed. In this case there was incarceration of the cervix uteri in the bladder, with retroflexion of the body of the organ. The operation had for its objects, the restoration of the organs involved to their normal relationship, and the conservation of the sexual and procreative functions. The patient, however, died on the sixth day, from septic peritonitis, but the autopsy showed maintenance of the parts in their true relationship, and pretty firm union throughout of the restored borders of the fistule.

CLASS V.—Upon 1 fistule in 1 patient, no operation was performed. In this case both the bladder and rectum were laid open, almost the entire extent of the vagina, which was reduced to a state of cicatricial contraction, scarcely admitting the point of the index finger and of a degree of hardness but little, if any, less than that of cartilage—no operation was attempted.

The details of all these cases are to be found in the *Louisville Review*, May, 1856; the *North American Med.-Chir. Review*, July and November, 1857; and the *New Orleans Medical and Surgical Journal*, January, March, and May, 1860. This series of cases, I may further state, constituted the largest that had at that date been published by any one surgeon, either in this country or Europe; and a careful examination will show that a large proportion of them presented the gravest complications, which were first met with the knife and dilator as a preparatory measure.

Of the first class of cases stated, there was 87½ per cent. of cures, secured at an expenditure of 1.57 operations to each case; or, considered in reference to the number of fistules, 1.22 operations to each closure.

As to the general character of the complications presented, the one of vesico-uterine fistule, and the two of incarceration of the cervix uteri in the bladder, will suffice to give some idea. The vesico-uterine fistule (Case V., *op. cit.*) resulted from a previous operation by me to restore a longitudinal laceration of the anterior lip of the cervix uteri and the adjacent part of the bladder, the mechanism of the remaining fistulous tract being precisely the same as that of perforation resulting from ordinary causes. Under these circumstances, I conceived the idea of restoring the

condition of the original laceration, and, after refreshing its superior angle anew, of closing the whole, with the view of maintaining the normal outlet of the catamenia. The operation was entirely successful, and thus was established the precedent of a cure of vesico-uterine fistule, with preservation of the procreative function. Since that date I have operated in the same manner successfully upon three other cases, occurring in the natural way, making in all four. This operation, I may say, has been referred to and described by several American writers; though, so far as I know, none have yet had the frankness to acknowledge the priority of my claim.

The two cases in the same class of incarceration of the cervix uteri in the bladder offered extraordinary difficulties, which were surmounted, first, by enlarging the fistule from each angle to nearly the full width of the vagina, and then, after refreshing the anterior lip of the cervix uteri and introducing in it the required number of sutures, the latter were made a lever with which to lift up the former from the cavity of the bladder to a level with the partially new and partially old anterior border of the fistule. In this relationship, the cervix uteri (now in the vagina) was braced and there maintained through a peculiar mechanism of my button suture, until the completion of the cure. Thus was secured in both cases alike, continence of urine and preservation of the procreative function.

In the first patient (Case XV., *op. cit.*) the enlargement of the fistule, the disengagement of the cervix uteri from the bladder, and the adjustment of the suture apparatus, were all effected at one sitting. In the second (Case XXXVIII., *op. cit.*), the first two steps above mentioned, in connection with vaginal dilatation, were carried out simply as a preparatory measure, and the third, afterwards, by refreshing and closing the borders of the fistule in their normal relationship.

Scarcely need I say this last procedure is by far the simplest, surest, and safest that can be adopted, and is the one I have myself ever since employed. I also claim the originality of this procedure. Only my two successful cases here referred to in Class I. are to be found upon record, either in this country or in Europe, so far as my reading extends.

A third patient, Class IV., I operated upon in the Royal Infirmary at Edinburgh, by request of Prof. Keiller and the late Sir James Y. Simpson. The result, although fatal as stated, was

to me most instructive, since it illustrated, in a most unmistakable manner, the importance of dividing the procedure into two stages, an immediate and a remote, as I have just described. The general interest of this case, at the time it was presented to me for examination, centred in the diversity of opinions which was said to exist with regard to the diagnosis, and in the failure of several of the most eminent gynæcologists of Great Britain to recognize the pathological physiology of the parts involved. Besides this it was among the first, if not the first, case of urinary fistule operated upon at that old seat of learning by the suture or bloody method. (For full details see Prof. Keiller's report in the *Edinburgh Medical Journal*, Oct. 1858.)

I have now treated four of these complicated cases, with the result of three cures and one death. The case terminating fatally, although very unfavorable for an operation, on account of an impaired state of the general health, could have been saved likewise, as I honestly believe, had I then known and understood the importance of preparatory treatment, as I did in the management of Case XXXVIII. a year later.

The case of kolpokleisis in Class II. (*op. cit.*, January, 1860) showed extensive loss of tissue, both in the vesico-vaginal and recto-vaginal septa. After overcoming the cicatricial contractions as far as it was possible by the means then at my disposal, and closing the recto-vaginal fistule, I proceeded to obliterate the vagina in the urethral portion, and thus departed from my usual practice. The latter procedure, it is proper to state, was also original with me at the time I adopted it, since I never knew until some nine years later, that it had been previously employed by the late Prof. Gustave Simon, then of Rostock.

Now, those who have kept pace with my labors in this department will remember that a controversy, in 1868, arose between Prof. Simon and myself with regard to the priority of this last named procedure, and that it resulted not only in the withdrawal on my part of all claim to it, but in a condemnation of the practice as employed by him and his followers.

Up to that date, a period of 13 years, having had occasion to resort to it but once in my practice, I was astonished to find that he had resorted to it 18 times, in about the same number of cases, which I had treated, and that upwards of 30 other cases had thus been treated in Germany by his followers. In speaking

of his practice at that time, he said in a letter addressed to me, through the *Deutsche Klinik*, November, 1868:—

"With what safety the cures are effected by my simplified method, the following report of my latest operations may serve to inform you, besides my works of 1862 and 1868, in which the results are given in detail. During six months' residence in Heidelberg (from May to October, 1868) we have operated on, in the hospital, 14 fistules in 14 patients. I have performed 12, and my assistants, Messrs. Heine and Hotz, each one. Three of the fistules were very small; they had remained after previous operations at Rostock; the other 11 were new cases, but 6 of them had been operated upon already once or several times by other surgeons. Several of them were of considerable size. In 5 cases 12 sutures were required to close them, in one even 15. [The following words I italicize.] *Moreover different complications existed, which made it necessary three times to embrace the posterior lip of the os uteri in the suture; once to overlap an existing atresia of the urethra; once to remove one, twice to perform kolpokleisis, and once to make a transplantation of a flap from the vulva.* Yet, notwithstanding these troublesome circumstances, all 14 patients were cured by 17 operations."

Now, out of these patients claimed to have been so successfully treated, 5, within a fraction of 36 per cent., had their generative functions destroyed, 3 by turning the mouth of the uterus into the bladder, and 2 by obliteration of the vagina. (Kolpokleisis.)

But why did I condemn the practice of kolpokleisis at this juncture, after having so long insisted upon its utility? It was simply that I had learned to avoid it entirely by further improvements in my preparatory treatment, and that I saw it was open to the greatest abuse. Not only this, but by investigating closely the reported cases, I found that the main benefit claimed for the procedure, namely, continence of urine, was of only temporary duration, and that the sequels resulting from stagnant or ammoniacal urine proved in a large proportion of cases not only more insupportable than the original disease, but even dangerous to life. In a case of spontaneous kolpokleisis, associated with a urethro-vaginal and a recto-vaginal fistule, which about that time came under my observation, vaginitis, metritis, cystitis, together with a train of most terrible reflexed complications of the nervous system, had almost completed their fatal *rôle*, at the end of five years, and the life of the individual was only saved by the timely

discharge of pent-up secretions through incisions and dilatation of the vaginal tract. Both fistules, after some months, were closed, and the patient was discharged in a normal condition, in which she has ever since remained, now about seven years. The patient, from Mobile, Ala., June 1, 1877, in response to my inquiries as to her present state of health says: "So far as your operation is concerned, excepting a little tenderness of the vagina, I am well. No trouble whatever with regard to the retention of urine; it is as good as before the operation. I cannot realize that I am so well."

In my reply to the letter referred to of Prof. Simon, I spoke of the history of this case, and the lesson taught by it in these words (*American Journal Medical Science*, July, 1870):—

"The patient's good constitution and the conservative reaction of her organism during the earlier stages of her traumatic malady, its continued and vigorous efforts for self-recovery, more frequent in ratio to the local irritation; in short, the whole picture before us confirming and elucidating the pathologic history, forbids us to attribute the decline of health or sympathetic sufferings to other than hydraulic and chemical causes, viz., the stagnation of urine retained in contact with mucous surfaces, unprepared to resist its irritating salts, and whose exudations of protective mucus have but increased the mischief by accelerating putrid fermentation. To open a free passage for discharge of these morbid secretions, is the first step dictated by experience towards removing their causes.

"We do not exhibit the foregoing as anything more than the particular application of a general principle. Lesions, apparently the same, occasion different degrees of suffering in different patients. European peasant women may be more robust, more phlegmatic than our American women, but chemistry and mechanism are invariable. To their laws are due the fearful sufferings we have witnessed in this case of spontaneous kolpokleisis, and we venture to suggest that if the luminaries of German surgery will descend from their Olympian heights, look up their kolpokleidic cases, and look into them again, they will see cause to change the note of triumphant gratulation with which Prof. Simon announces his successful operations."

Thus was shown, by this case, that kolpokleisis, although the blind work of nature, was not only unnecessary, but detrimental

to health in the highest degree, and had to be removed in order to save the life of the individual. Who will dare say that the result would have been in any respect different, even had it been effected by the knife of the most skilful surgeon? Thus was enunciated the first apposition to the generally received German dogma of kolpokleisis.

Conclusive, however, as the evil results in the above case were to my own mind, I was still anxious to get the experience of other surgeons upon the subject, and so began to look forward to the time when I would have the opportunity of visiting Germany, and studying the operation there, where I knew it was so extensively employed by the master himself, the late Prof. Gustave Simon, of Heidelberg, with whose name kolpokleisis, through good and through evil report, will ever remain inseparably connected. Suffice it to say, the loss of my health in 1874, and the necessity of relaxation from home cares and business, gave me the opportunity of carrying out the wish above indicated. A brief reference, therefore, to the results of my observations and experience with Prof. Simon will not, I trust, be considered out of place here. Before doing so, however, it is proper to state that I was received most kindly by the German professor, who not only extended to me a most cordial welcome, but opened a *concour* in his clinic, in which I was invited to take part, with a view of determining by actual demonstration the relative merits of our respective modes of operation for vesico-vaginal fistule, the only true mode of arbitrating theories and elucidating facts. The proposition I considered most liberal, and I accepted it in the same spirit with which it was made, believing that it would be productive of good results, not only to us, as competitors, but to the advancement of science.

Seven operations were performed by us upon six cases, four by Prof. S., and three by me, two being jointly upon the same patient (the little Russian, as she was called).

Prof. Simon, in his report of the same (*Wiener Med. Wochenschrift*, for July and August, 1876), entitled, "Comparison of the Bozeman Method of Operating for the Cure of Vesico-vaginal Fistule with that of the Author," describes all these cases and operations, together with the five additional operations which he found necessary to perform after my departure from Heidelberg, to complete the treatment. Here are our joint results:—

Upon 7 fistules in 6 patients, 13 operations were performed.

CASE I[1].—Upon 1 fistule in 1 patient, 3 operations were performed by Prof. Simon, and the cure completed with preservation of the generative functions, but only partial restoration of continence of urine, owing to loss of urethral substance from repeated operations.

CASE II.—Upon 1 fistule in 1 patient, 2 operations were performed by Prof. Simon, the first, six years previously, for completing a morbid kolpokleisis in the urethral portion of the vagina, with complete loss of the generative functions; the second, for reclosure of the same obliterated point after it had been reopened by the passage of a calculus. Death on the sixth day. Autopsy showed suppurative pyelitis of both kidneys, and the blocking up of the left ureter by a calculus.

CASE III.—Upon 2 fistules in 1 patient, 2 operations were performed by Prof. Simon, after the removal of a previous kolpokleisis by another surgeon, with restoration of the normal outlet of the catamenia and of continence of urine, though a ring-formed contraction of the vaginal orifice still remained as a serious impediment to the generative functions.

CASE IV.—Upon 1 fistule in 1 patient, 3 operations were performed by Prof. Simon, after incisions and immediate distension of the vagina, with restoration of continence of urine, and maintainance of the normal outlet of the catamenia; but there afterwards remained obliteration of the vagina above the fistule to the size of a No. 10 bougie, and loss of parturient functions.

CASE I.—Upon 1 fistule in 1 patient, 1 operation was performed by myself, and the cure completed with entire preservation of the generative functions.

CASE II.—Upon 0 fistules in 0 patient, 1 operation was performed by myself, after seven-eighths closure of the original fistule by Prof. S. (little Russian), with the result of almost complete closure, but the success was afterwards lost by the reopening of the fistule, due mainly to an abnormal relationship of the parts, brought about by the preceding operation, and which could only have been avoided by reproducing the original fistule and making the closure de novo.

[1] The numbering of the cases in the above table corresponds with the order in which they were reported in the paper of Professor Simon, previously quoted.

CASE III.—Upon 1 fistule in 1 patient 1 operation was performed by myself, after the case had been pronounced incurable by Prof. Simon, and condemned to kolpokleisis, with entire preservation of the generative functions, and closure of the fistule to a point quite small, admitted by Prof. Simon himself to be easy of cure at another slight operation.

Now I do not proprose in this connection to comment on the individual results of Prof. Simon or of myself, as here jointly set forth, further than to indicate the contrast between them and the general exhibit of my table 15 years before. From this comparison, the reader will be able to judge for himself, not only of the marked difference between his method of operating and that of myself, but of what constituted a cure of vesico-vaginal fistule, as viewed from our respective standpoints, when we met in Heidelberg. If the facts here presented do not furnish a complete answer to the question, *Is kolpokleisis ever necessary?* they at least show its influence, and indicate the direction of further investigation of the subject.

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